# Editorial

# What's the prognosis, Doc?

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Physicians, particularly family physicians, are frequently called upon to provide an opinion on a patient's prognosis. Physicians might be asked to justify a patient's disability leave by anticipating the duration of leave or determining if a disability is temporary or permanent; explain home-care needs or request admission into a long-term care facility; or determine the evolution of an illness and establish the level of care required.

To do so, physicians typically consider a number of factors including primary diagnosis; severity, stage, and evolution of the illness; comorbidities; and the patient's clinical state and access to personal and community resources. Sometimes prognosis is easy to determine, as with patients suffering from chemotherapy- and radiation-resistant metastatic lung cancer, who are nearing death. Other times it becomes more complicated, as with patients suffering from severe heart or lung diseases who, despite experiencing disturbed ventricular and expiratory functions, might survive for several years. In these cases, physicians often rely on personal experience or subjective intuition (a "clinical gut feeling") to establish prognosis.

How much confidence can we actually place in personal intuition when establishing patient prognosis? In 2008, researchers set out to discover whether a simple question could prove effective in establishing a medium-term prognosis for sick patients. That question was "Would you be surprised if this person died within the next 12 months?"[1] The study included 147 hemodialysis patients and demonstrated that physicians were able to predict their patients' mortality reasonably well. Probability of death within a year for patients in the "I would not be surprised" group was 3.5 times higher than in the other group (odds ratio = 3.507, calculated by logistic regression; 95% CI 1.356 to 9.067). Since the study was conducted, use of this question has been strongly encouraged to establish long-term and palliative care needs.

However, a recently published meta-analysis has shed some doubt upon this conviction.[2] The authors identified 16 prospective studies (17 cohorts) using this "surprise question." Their combined results indicated the question had a sensitivity of 67% and a specificity of 80%. However, the authors calculated a positive predictive value of only 37%. This means that only about one-third of patients in the "I would not be surprised" group actually died in the next 12 months (time frame used in all but 3 studies). The results were somewhat better in studies consisting of cancer patients (positive predictive value of 47%), but prediction was quite low in other patients (positive predictive value of 31%). As such, seriously ill patients who want to know whether they will live another year are better off flipping a coin than asking their doctor!

These findings are troubling, particularly with respect to medical assistance in dying. Indeed, patient prognosis is among the required criteria for receiving this assistance. Federal law stipulates that death must be reasonably foreseeable,[3] while in Quebec patients must be at the end-of-life stage (Article 26).[4] Yet upon considering the above findings, it becomes evident that it is not easy to predict the fates of our patients. Certainly, it is easier when death is imminent—when a person is bedridden, incapacitated, unconscious, unable to eat or drink, at a stage when it is clear that he or she will not survive long. But the further removed a patient is from imminent death, the more difficult it is to predict.

Together these factors raise doubt in the ability of physicians to truly predict a prognosis for their patients. The most absurd aspect of this story is that, despite these gaps, physicians remain the most reasonably apt to establish prognosis. However, it is important to recognize that our predictions are far from infallible.

**References**

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